<u>IN THE CLAIMS</u>

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims.

1.   (Currently Amended) A moving image coding apparatus which codes time series frames constituting moving image data, ~~characterized by~~ comprising:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components;

first extraction means for classifying the plurality of subbands into a first group and a second group and extracting, as motion compensation target data, data of a predetermined number of upper bits of frequency component coefficient data forming subbands belonging to the first group;

second extraction means for extracting data of a predetermined number of lower bits of each of frequency component coefficient data forming subbands belonging to the first group;

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by said first extraction means and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded;

first coding means for obtaining a difference value between predicted value information generated by said motion compensation means and motion compensation target data of the current frame and coding the difference value and the

- 3 -

motion vector information;

second coding means for coding, as non motion compensation target data, data of a predetermined number of lower bits of each frequency component coefficient data extracted by said second extraction means and frequency component coefficient data of subbands belonging to the second group; and

multiplexing means for multiplexing the code data obtained by said first coding means and said second coding means.

2.   (Currently Amended) The apparatus according to claim 1, ~~characterized in that~~ wherein

said decomposition means decomposes a frame into a plurality of subbands on the basis of a discrete wavelet transformation method,

the first group comprises subbands of low frequency components including a subband LL, and

the second group comprises subbands of frequency components higher in frequency than the low frequency components.

3.   (Currently Amended) The apparatus according to claim 1 ~~or 2~~, ~~characterized in that~~ wherein said second coding means performs coding for each bitplane at each bit position which represents frequency component data or for each sub bitplane.

4.   (Currently Amended) The apparatus according to claim 3, ~~characterized in that~~ wherein said second coding means includes selection means for selecting bits in order of a least significant bit to an upper bit as bitplanes serving as non

- 4 -

coding targets, on the basis of a generated code amount, and codes bitplanes other than the bitplanes selected by the selection means.

5. (Currently Amended) A control method for a moving image coding apparatus which codes time series frames constituting moving image data, ~~characterized by~~ comprising:

a decomposition step of decomposing a frame into a plurality of subbands having different frequency components;

a first extraction step of classifying the plurality of subbands into a first group and a second group and extracting, as motion compensation target data, data of a predetermined number of upper bits of frequency component coefficient data forming subbands belonging to the first group;

a second extraction step of extracting data of a predetermined number of lower bits of each of frequency component coefficient data forming subbands belonging to the first group;

a motion compensation step of generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted in the first extraction step and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded;

a first coding step of obtaining a difference value between predicted value information generated in the motion compensation step and motion compensation target data of the current frame and coding the difference value and the motion vector information;

a second coding step of coding, as non motion compensation target

data, data of a predetermined number of lower bits of each frequency component coefficient data extracted in the second extraction step and frequency component coefficient data of subbands belonging to the second group; and

a multiplexing step of multiplexing the code data obtained in the first coding step and the second coding step.

6.   (Currently Amended) A computer program which is read and executed by a computer to function as a moving image coding apparatus which codes time series frames constituting moving image data, ~~characterized in that~~ <u>wherein</u> the computer program functions as:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components;

first extraction means for classifying the plurality of subbands into a first group and a second group and extracting, as motion compensation target data, data of a predetermined number of upper bits of frequency component coefficient data forming subbands belonging to the first group;

second extraction means for extracting data of a predetermined number of lower bits of each of frequency component coefficient data forming subbands belonging to the first group;

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by the first extraction means and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded;

first coding means for obtaining a difference value between predicted value information generated by the motion compensation means and motion compensation target data of the current frame and coding the difference value and the motion vector information;

second coding means for coding, as non motion compensation target data, data of a predetermined number of lower bits of each frequency component coefficient data extracted by the second extraction means and frequency component coefficient data of subbands belonging to the second group; and

multiplexing means for multiplexing the code data obtained by the first coding means and the second coding means.

7.   (Currently Amended) A computer readable storage medium ~~characterized by~~ storing a computer program ~~defined~~ as set forth in claim 6.

8.   (Currently Amended) A moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus ~~defined in any one of claims 1 to 4~~ as set forth in claim 1, ~~characterized by~~ comprising:

separation means for separating code data of an input frame into first code data and second code data respectively corresponding to the first group and the second group;

first decoding means for generating decoded data of the upper bits of a subband belonging to the first group of a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of the subband belonging to the first group of the current frame obtained by decoding the separated first

code data and decoded data of the predetermined upper bits corresponding to the first group of a preceding frame;

second decoding means for decoding the second code data;

generation means for generating decoded data corresponding to the first group of the current frame by combining decoded data of lower bits of the first group obtained by said second decoding means and decoded data of upper bits obtained by said first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to said decomposition means on the basis of the decoded data of the subband belonging to the first group which is generated by said generation means, and the decoded data of the subband belonging to the second group which is obtained by said second decoding means.

9.   (Currently Amended) ~~The~~ A moving image decoding apparatus ~~according to claim 8, characterized by~~ decoding moving image data coded by a moving image coding apparatus which codes time series frames constituting moving image data and which comprises:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components,

first extraction means for classifying the plurality of subbands into a first group and a second group and extracting, as motion compensation target data, data of a predetermined number of upper bits of frequency component coefficient data forming subbands belonging to the first group,

second extraction means for extracting data of a predetermined

- 8 -

number of lower bits of each of frequency component coefficient data forming subbands belonging to the first group,

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by said first extraction means and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded,

first coding means for obtaining a difference value between predicted value information generated by said motion compensation means and motion compensation target data of the current frame and coding the difference value and the motion vector information,

second coding means for coding, as non motion compensation target data, data of a predetermined number of lower bits of each frequency component coefficient data extracted by said second extraction means and frequency component coefficient data of subbands belonging to the second group, and

multiplexing means for multiplexing the code data obtained by said first coding means and said second coding means,

said moving image decoding apparatus comprising:

separation means for separating code data of an input frame into first code data and second code data respectively corresponding to the first group and the second group;

first decoding means for generating decoded data of the upper bits of a subband belonging to the first group of a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of the subband

belonging to the first group of the current frame obtained by decoding the separated first code data and decoded data of the predetermined upper bits corresponding to the first group of a preceding frame;

second decoding means for decoding the second code data;

generation means for generating decoded data corresponding to the first group of the current frame by combining decoded data of lower bits of the first group obtained by said second decoding means and decoded data of upper bits obtained by said first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to said decomposition means on the basis of the decoded data of the subband belonging to the first group which is generated by said generation means, and the decoded data of the subband belonging to the second group which is obtained by said second decoding means,

said moving image data decoding apparatus further comprising, when [[a]] said moving image decoding apparatus ~~defined in claim 8~~ decodes moving image data coded by a moving image coding apparatus ~~defined~~ as set forth in claim 3: [[,]]

setting means for setting a predetermined number of code data of bitplanes, of the second code data, which ranges from a lower bitplane to an upper bitplane, as data other than data to be decoded.

10. (Currently Amended) The apparatus according to claim 9, ~~characterized in that~~ wherein said setting means measures a time required to reconstruct one preceding frame, and sets the number of bitplanes as bitplanes other than bitplanes to be decoded for each subband on the basis of the measured time value.

11.   (Currently Amended) A control method for a moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus as set forth in claim 1 ~~defined in any one of claims 1 to 4, characterized by~~ comprising:

a separation step of separating code data of an input frame into first code data and second code data respectively corresponding to the first group and the second group;

a first decoding step of generating decoded data of the upper bits of a subband belonging to the first group of a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of the subband belonging to the first group of the current frame obtained by decoding the separated first code data and decoded data of the predetermined upper bits corresponding to the first group of a preceding frame;

a second decoding step of decoding the second code data;

a generation step of generating decoded data corresponding to the first group of the current frame by combining decoded data of lower bits of the first group obtained in the second decoding step and decoded data of upper bits obtained in the first decoding step; and

a reconstruction step of reconstructing an image of the current frame by performing processing inverse to the decomposition step on the basis of the decoded data of the subband belonging to the first group which is generated in the generation step, and the decoded data of the subband belonging to the second group which is obtained in the second decoding step.

12.　(Currently Amended) A computer program which is read and executed by a computer to function as a moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus ~~as set forth in claim 1~~ ~~defined in any one of claims 1 to 4, characterized in that~~ <u>wherein</u> the computer program functions as:

separation means for separating code data of an input frame into first code data and second code data respectively corresponding to the first group and the second group;

first decoding means for generating decoded data of the upper bits of a subband belonging to the first group of a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of the subband belonging to the first group of the current frame obtained by decoding the separated first code data and decoded data of the predetermined upper bits corresponding to the first group of a preceding frame;

second decoding means for decoding the second code data;

generation means for generating decoded data corresponding to the first group of the current frame by combining decoded data of lower bits of the first group obtained by the second decoding means and decoded data of upper bits obtained by the first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to the decomposition means on the basis of the decoded data of the subband belonging to the first group which is generated by the generation means, and the decoded data of the subband belonging to the second group which is obtained by the second decoding means.

13. (Currently Amended) A computer readable storage medium ~~characterized by~~ storing a computer program ~~defined~~ <u>as set forth</u> in claim 12.

14. (Currently Amended) A moving image coding apparatus which codes time series frames constituting moving image data, ~~characterized by~~ comprising:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components;

first extraction means for extracting data of a predetermined number of upper bits of frequency component coefficient data constituting each subband as motion compensation target data;

second extraction means for extracting data of a predetermined number of lower bits of the frequency component coefficient data constituting each subband as non motion compensation target data;

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by said first extraction means and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded;

first coding means for obtaining a difference value between predicted value information generated by said motion compensation means and motion compensation target data of the current frame and coding the difference value and the motion vector information;

second coding means for coding data of a predetermined number of lower bits of each frequency component coefficient data extracted by said second

extraction means; and

multiplexing means for multiplexing the code data obtained by said first coding means and said second coding means.

15.   (Currently Amended) The apparatus according to claim 14, ~~characterized in that~~ wherein said decomposition means comprises means for decomposing a frame into a plurality of subbands on the basis of a discrete wavelet transformation method.

16.   (Currently Amended) The apparatus according to claim 14 ~~or 15~~, ~~characterized in that~~ wherein said second coding means performs coding for each bitplane at each bit position which represents frequency component data or for each sub bitplane.

17.   (Currently Amended) The apparatus according to claim 16, ~~characterized in that~~ wherein said second coding means includes selection means for selecting bits in order of a least significant bit to an upper bit as bitplanes serving as non coding targets, on the basis of a generated code amount, and codes bitplanes other than the bitplanes selected by the selection means.

18.   (Currently Amended) A control method for a moving image coding apparatus which codes time series frames constituting moving image data, ~~characterized by~~ comprising:

a decomposition step of decomposing a frame into a plurality of subbands having different frequency components;

- 14 -

a first extraction step of extracting data of a predetermined number of upper bits of frequency component coefficient data constituting each subband as motion compensation target data;

a second extraction step of extracting data of a predetermined number of lower bits of the frequency component coefficient data constituting each subband as non motion compensation target data;

a motion compensation step of generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted in the first extraction step and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded;

a first coding step of obtaining a difference value between predicted value information generated in the motion compensation step and motion compensation target data of the current frame and coding the difference value and the motion vector information;

a second coding step of coding data of a predetermined number of lower bits of each frequency component coefficient data extracted in the second extraction step; and

a multiplexing step of multiplexing the code data obtained in the first coding step and the second coding means.

19.   (Currently Amended) A computer program which is read and executed by a computer to function as a moving image coding apparatus which codes time series frames constituting moving image data, ~~characterized in that~~ wherein the computer program functions as:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components;

first extraction means for extracting data of a predetermined number of upper bits of frequency component coefficient data constituting each subband as motion compensation target data;

second extraction means for extracting data of a predetermined number of lower bits of the frequency component coefficient data constituting each subband as non motion compensation target data;

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by the first extraction means and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded;

first coding means for obtaining a difference value between predicted value information generated by the motion compensation means and motion compensation target data of the current frame and coding the difference value and the motion vector information;

second coding means for coding data of a predetermined number of lower bits of each frequency component coefficient data extracted by the second extraction means; and

multiplexing means for multiplexing the code data obtained by the first coding means and the second coding means.

20.   (Currently Amended) A computer readable storage medium

characterized by storing a computer program ~~defined~~ <u>as set forth</u> in claim 19.

21.   (Currently Amended) A moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus <u>as set forth in claim 14</u> ~~defined in any one of claims 14 to 17, characterized by~~ comprising:

separation means for separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

first decoding means for generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

second decoding means for decoding the second code data;

generation means for generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each subband obtained by said second decoding means and the decoded data of the upper bits of each subband obtained by said first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to said decomposition means with respect to the frequency component data of the subband generated by said generation means.

22.   (Currently Amended) ~~The~~ <u>A moving image decoding</u> apparatus ~~according to claim 21, characterized by further~~ <u>decoding moving image data coded by a</u>

- 17 -

moving image coding apparatus which codes time series frames constituting moving image data and which comprises:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components,

first extraction means for extracting data of a predetermined number of upper bits of frequency component coefficient data constituting each subband as motion compensation target data,

second extraction means for extracting data of a predetermined number of lower bits of the frequency component coefficient data constituting each subband as non motion compensation target data,

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by said first extraction means and decoded data corresponding to motion compensation target data obtained when a preceding frame is coded,

first coding means for obtaining a difference value between predicted value information generated by said motion compensation means and motion compensation target data of the current frame and coding the difference value and the motion vector information,

second coding means for coding data of a predetermined number of lower bits of each frequency component coefficient data extracted by said second extraction means, and

multiplexing means for multiplexing the code data obtained by said first coding means and said second coding means,

said moving image decoding apparatus comprising:

separation means for separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

first decoding means for generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

second decoding means for decoding the second code data;

generation means for generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each subband obtained by said second decoding means and the decoded data of the upper bits of each subband obtained by said first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to said decomposition means with respect to the frequency component data of the subband generated by said generation means,

said moving image decoding apparatus further comprising, when [[a]] said moving image decoding apparatus ~~defined in claim 21~~ decodes moving image data coded by a moving image coding apparatus as set forth ~~defined~~ in claim 16: [[,]]

setting means for setting a predetermined number of code data of bitplanes, of the second code data, which ranges from a lower bitplane to an upper bitplane, as data other than data to be decoded.

23.   (Currently Amended) The apparatus according to claim 22, ~~characterized in that~~ <u>wherein</u> said setting means increases the number of bitplanes which are not to be decoded with respect to a subband in which frequency components gradually decrease in frequency, when a time required to reconstruct one preceding frame is measured, and a value of the measured time is larger than a first threshold, and decreases the number of bitplanes which are not to be decoded with respect to a subband in which frequency components gradually increase in frequency, when the value of the measured time is smaller than a second threshold.

24.   (Currently Amended) A control method for a moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus <u>as set forth in claim 14</u> ~~defined in any one of claims 14 to 17, characterized by~~ comprising:

a separation step of separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

a first decoding step of generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

a second decoding step of decoding the second code data;

a generation step of generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each

subband obtained in the second decoding step and the decoded data of the upper bits of each subband obtained in the first decoding step; and

a reconstruction step of reconstructing an image of the current frame by performing processing inverse to the decomposition step with respect to the frequency component data of the subband generated in the generation step.

25.   (Currently Amended) A computer program which is read and executed by a computer to function as a moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus <u>as set forth in claim 14</u> ~~defined in any one of claims 14 to 17, characterized in that~~ <u>wherein</u> the computer program functions as:

separation means for separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

first decoding means for generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to the predetermined upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

second decoding means for decoding the second code data;

generation means for generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each subband obtained by the second decoding means and the decoded data of the upper bits of each subband obtained by the first decoding means; and

reconstruction means for reconstructing an image of the current

frame by performing processing inverse to the decomposition means with respect to the

frequency component data of the subband generated by the generation means.

26.   (Currently Amended) A computer readable storage medium

~~characterized by~~ storing a computer program ~~defined~~ as set forth in claim 25.

27.   (Currently Amended) A moving image coding apparatus which

codes time series frames constituting moving image data, ~~characterized by~~ comprising:

discrete wavelet transformation means for obtaining information of a

plurality of subbands by performing discrete wavelet transformation for a frame;

inter frame coding means for performing motion compensation

coding for a first group comprising subbands of low frequency components from said

discrete wavelet transformation means on the basis of decoded data of each subband

included in the first group when a preceding frame is coded;

intra frame coding means for performing coding within a current

frame with respect to a second group comprising subbands of high frequency components

higher in frequency than the low frequency components; and

multiplexing means for multiplexing code data coded by said inter

frame coding means and said intra frame coding means.

28.   (Currently Amended) A moving image coding method of coding

time series frames constituting moving image data, ~~characterized by~~ comprising:

a discrete wavelet transformation step of obtaining information of a

plurality of subbands by performing discrete wavelet transformation for a frame;

an inter frame coding step of performing motion compensation coding for a first group comprising subbands of low frequency components from the discrete wavelet transformation step on the basis of decoded data of each subband included in the first group when a preceding frame is coded;

an intra frame coding step of performing coding within a current frame with respect to a second group comprising subbands of high frequency components higher in frequency than the low frequency components; and

a multiplexing step of multiplexing code data coded in the inter frame coding step and the intra frame coding means.

29.   (Currently Amended) A moving image decoding apparatus which decodes code data obtained by a moving image coding method ~~defined~~ as set forth in claim 28, ~~characterized by~~ comprising:

separation means for separating input code data into inter frame code data and intra frame code data;

inter frame decoding means for generating data of a subband of a low frequency component by decoding the separated inter frame code data with motion compensation;

intra frame decoding means for generating data of a subband of a frequency component higher in frequency than the low frequency component by intra frame coding the separated intra frame code data; and

reconstruction means for reconstructing an image of a current frame by performing inverse discrete wavelet transformation for the data of the subbands

obtained by said inter frame decoding means and said intra frame decoding means.

30.   (Currently Amended) A moving image decoding method of
decoding code data obtained by a moving image coding method ~~defined~~ as set forth in
claim 28, ~~characterized by~~ comprising:

a separation step of separating input code data into inter frame code
data and intra frame code data;

an inter frame decoding step of generating data of a subband of a
low frequency component by decoding the separated inter frame code data with motion
compensation;

an intra frame decoding step of generating data of a subband of a
frequency component higher in frequency than the low frequency component by intra
frame coding the separated intra frame code data; and

a reconstruction step of reconstructing an image of a current frame
by performing inverse discrete wavelet transformation for the data of the subbands
obtained in the inter frame decoding step and the intra frame decoding step.

31.   (Currently Amended) A moving image coding apparatus which
codes time series frames constituting moving image data, ~~characterized by~~ comprising:

decomposition means for decomposing a frame into a plurality of
subbands having different frequency components;

first extraction means for, with a threshold set for each subband
being represented by TB, extracting data of upper bits as motion compensation target data
which excludes lower TB bits of frequency component coefficient data constituting each

subband;

second extraction means for extracting data of lower TB bits of the frequency component coefficient data constituting each subband as non motion compensation target data;

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by said first extraction means and decoded data corresponding to the motion compensation target data obtained when a preceding frame is coded;

first coding means for obtaining a difference value between predicted value information generated by said motion compensation means and the motion compensation target data in the current frame and coding the difference value and the motion vector information;

second coding means for coding data of the lower TB bits of each frequency component coefficient data extracted by said second extraction means; and

multiplexing means for multiplexing code data obtained by said first coding means and said second coding means.

32.   (Currently Amended) The apparatus according to claim 31, ~~characterized in that~~ <u>wherein</u> said decomposition means comprises means for decomposing a frame into a plurality of subbands on the basis of a discrete wavelet transformation method.

33.   (Currently Amended) The apparatus according to claim 31 ~~or 32~~,

- 25 -

characterized in that wherein said second coding means performs coding for each bitplane at each bit position which represents frequency component data or for each sub bitplane.

34.   (Currently Amended) The apparatus according to claim 33, characterized in that wherein said second coding means includes selection means for selecting bits from a least significant bit to an upper bit as bitplanes serving as non coding targets, on the basis of a generated code amount, and codes bitplanes other than the bitplanes selected by the selection means.

35.   (Currently Amended) The apparatus according to claim 34 any one of claims 31 to 34, characterized in that wherein the threshold TB set for each subband is 0 for subbands of low frequency components.

36.   (Currently Amended) A control method for a moving image coding apparatus which codes time series frames constituting moving image data, characterized by comprising:

a decomposition step of decomposing a frame into a plurality of subbands having different frequency components;

a first extraction step of, with a threshold set for each subband being represented by TB, extracting data of upper bits as motion compensation target data which excludes lower TB bits of frequency component coefficient data constituting each subband;

a second extraction step of extracting data of lower TB bits of the frequency component coefficient data constituting each subband as non motion compensation target data;

motion compensation means for generating motion vector

information and predicted value information on the basis of motion compensation target

data of a current frame extracted in the first extraction step and decoded data corresponding

to the motion compensation target data obtained when a preceding frame is coded;

a first coding step of obtaining a difference value between predicted

value information generated in the motion compensation step and the motion compensation

target data in the current frame and coding the difference value and the motion vector

information;

a second coding step of coding data of the lower TB bits of each

frequency component coefficient data extracted in the second extraction step; and

a multiplexing step of multiplexing code data obtained in the first

coding step and the second coding step.

37.   (Currently Amended) A computer program which is read and

executed by a computer to function as a moving image coding apparatus which codes time

series frames constituting moving image data, ~~characterized in that~~ wherein the computer

program functions as:

decomposition means for decomposing a frame into a plurality of

subbands having different frequency components;

first extraction means for, with a threshold set for each subband

being represented by TB, extracting data of upper bits as motion compensation target data

which excludes lower TB bits of frequency component coefficient data constituting each

subband;

second extraction means for extracting data of lower TB bits of the

frequency component coefficient data constituting each subband as non motion compensation target data;

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by the first extraction means and decoded data corresponding to the motion compensation target data obtained when a preceding frame is coded;

first coding means for obtaining a difference value between predicted value information generated by the motion compensation means and the motion compensation target data in the current frame and coding the difference value and the motion vector information;

second coding means for coding data of the lower TB bits of each frequency component coefficient data extracted by the second extraction means; and

multiplexing means for multiplexing code data obtained by the first coding means and the second coding means.

38. (Currently Amended) A computer readable storage medium characterized by storing a computer program defined as set forth in claim 37.

39. (Currently Amended) A moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus as set forth in claim 31 defined in any one of claims 31 to 35, characterized by comprising:

separation means for separating code data of an input frame into first code data corresponding to motion compensation target data and second code data

- 28 -

corresponding to non motion compensation target data;

first decoding means for generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to data of the upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

second decoding means for decoding the second code data;

generation means for generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each subband obtained by said second decoding means and the decoded data of the upper bits of each subband obtained by said first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to said decomposition means for the frequency component data of the subband generated by said generation means.

40.   (Currently Amended) ~~The~~ A moving image decoding apparatus ~~according to claim 39, characterized by further~~ decoding moving image data coded by a moving image coding apparatus which codes time series frames constituting moving image data and which comprises:

decomposition means for decomposing a frame into a plurality of subbands having different frequency components,

first extraction means for, with a threshold set for each subband being represented by TB, extracting data of upper bits as motion compensation target data which excludes lower TB bits of frequency component coefficient data constituting each

subband,

second extraction means for extracting data of lower TB bits of the frequency component coefficient data constituting each subband as non motion compensation target data,

motion compensation means for generating motion vector information and predicted value information on the basis of motion compensation target data of a current frame extracted by said first extraction means and decoded data corresponding to the motion compensation target data obtained when a preceding frame is coded,

first coding means for obtaining a difference value between predicted value information generated by said motion compensation means and the motion compensation target data in the current frame and coding the difference value and the motion vector information,

second coding means for coding data of the lower TB bits of each frequency component coefficient data extracted by said second extraction means, and

multiplexing means for multiplexing code data obtained by said first coding means and said second coding means,

said moving image decoding apparatus comprising: [[,]]

separation means for separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

first decoding means for generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to data of the upper bits of each subband in the current frame

- 30 -

obtained by decoding the separated first code data and decoded data of motion

compensation data in a preceding frame;

second decoding means for decoding the second code data;

generation means for generating frequency component data of each

subband in the current frame by combining the decoded data of the lower bits of each

subband obtained by said second decoding means and the decoded data of the upper bits of

each subband obtained by said first decoding means; and

reconstruction means for reconstructing an image of the current

frame by performing processing inverse to said decomposition means for the frequency

component data of the subband generated by said generation means,

said moving image decoding apparatus further comprising, when [[a]] said

moving image decoding apparatus ~~defined in claim 39~~ decodes moving image data coded

by a moving image coding apparatus as set forth ~~defined~~ in claim 33: [[,]]

setting means for setting a predetermined number of code data of

bitplanes, of the second code data, which ranges from a lower bitplane to an upper bitplane,

as data other than data to be decoded.

41.   (Currently Amended) The apparatus according to claim 40,

~~characterized in that~~ wherein said setting means increases the number of bitplanes which

are not to be decoded with respect to a subband in which frequency components gradually

decrease in frequency, when a time required to reconstruct one preceding frame is

measured, and a value of the measured time is larger than a first threshold, and decreases

the number of bitplanes which are not to be decoded with respect to a subband in which

frequency components gradually increase in frequency, when the value of the measured

time is smaller than a second threshold.

42.   (Currently Amended) A control method for a moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus as set forth in claim 31 ~~defined in any one of claims 31 to 35~~, characterized by comprising:

a separation step of separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

a first decoding step of generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to data of the upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

a second decoding step of decoding the second code data;

a generation step of generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each subband obtained in the second decoding step and the decoded data of the upper bits of each subband obtained in the first decoding step; and

a reconstruction step of reconstructing an image of the current frame by performing processing inverse to the decomposition step for the frequency component data of the subband generated in the generation step.

43.   (Currently Amended) A computer program which is read and

executed by a computer to function as a moving image decoding apparatus which decodes moving image data coded by a moving image coding apparatus <u>as set forth in claim 31</u> ~~defined in any one of claims 31 to 35~~, ~~characterized in that~~ <u>wherein</u> the computer program functions as:

separation means for separating code data of an input frame into first code data corresponding to motion compensation target data and second code data corresponding to non motion compensation target data;

first decoding means for generating decoded data of upper bits of each subband in a current frame on the basis of a difference value and motion vector information with respect to data of the upper bits of each subband in the current frame obtained by decoding the separated first code data and decoded data of motion compensation data in a preceding frame;

second decoding means for decoding the second code data;

generation means for generating frequency component data of each subband in the current frame by combining the decoded data of the lower bits of each subband obtained by the second decoding means and the decoded data of the upper bits of each subband obtained by the first decoding means; and

reconstruction means for reconstructing an image of the current frame by performing processing inverse to the decomposition means for the frequency component data of the subband generated by the generation means.

44.   (Currently Amended) A computer readable storage medium ~~characterized by~~ storing a computer program <u>as set forth</u> ~~defined~~ in claim 43.